



Progress Report — Design for Conservation

(July, 1977 - January 1, 1981)

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The Design for Conservation funded by receipts from the 1/8 of 1% sales tax approved by Missouri voters in November, 1976, listed three major areas of advancement for conservation in Missouri. These were: *conservation lands* for upland and wetland wildlife, natural areas, rare and endangered species, state forests, stream access, lake development, springs and branches, and fish hatchery operations; *public services*, including terrestrial

and aquatic wildlife management, forest management, law enforcement, information and education; and *management and research*, such as great rivers borders enhancement, wildlife, aquatic and forest research, and forest fire control.

Listed below are the accomplishments as of January 1, 1981, in each of those categories.

CONSERVATION LANDS

From July 1, 1977, through January 1, 1981, 96,833 acres were acquired in 83 counties, involving 237 purchases, at a cost of \$62,044,423. In addition, the Department has acquired 40,930 acres through license/lease and 1,841 acres through gifts or donations. Also, the Department

Upland Wildlife Lands
Wetland Wildlife Lands
State Forests

Stream Frontages
Community Lakes

Natural Areas, Rare and Endangered Species Habitat and Other Special Lands

—13,171 acres in 21 counties
—9,082 acres in 11 counties
—Two urban forests were acquired and the State Forest Nursery has been expanded. An additional 42,926 acres of state forests have been purchased.
—16,721 acres of stream frontage and accesses have been acquired which borders 48 miles of stream in 26 counties.
—One lake was purchased in Boone County, another in Washington-Iron-St. Francois counties, and new lake sites were acquired in Vernon and Osage counties.

—Five caves for the endangered Indiana and Gray Bats were purchased, along with 5 tracts comprising 734 acres of marshes and swamps, 7 tracts comprising 805 acres of prairies, with 10 natural areas and 6 tracts, near metropolitan areas, classified as urban wild acres.

claimed 859 acres of islands in the Missouri River.

Lands acquired breakdown as follows: forest land 63%; prairie and pasture land 14%; croplands 20%; marsh/lake 2%; other less than .1%.

PUBLIC SERVICES

Wildlife Management Services

The wildlife damage control program has been expanded by adding two new wildlife damage control agents and establishing three districts to improve services.

On-the-farm wildlife management assistance has increased through Field Service Agents and Conservation Agents. Included are more wildlife food and cover plant materials and the assignment of a biologist to assist landowners interested in establishing and managing native grasses for forage and wildlife.

Aquatic Wildlife Management Services

Fisheries extension services were expanded to provide technical information to commercial fish farmers through meetings and newsletters.

The increased staffing of management biologists has allowed further application and evaluation of new management techniques, such as slot length limits on heavily fished public lakes.

A planning team approach to the development and management of newly acquired public lands was implemented to insure that maximum recreational benefits are provided on all public areas.

The special winter fish-for-fun trout season was expanded to include all four trout parks.

The expanded Urban Fishing Program in St. Louis and Kansas City has brought good fishing to inner-city residents as well as providing facilities and instruction for children's fishing groups. The program is also being used by local hospitals in their rehabilitation programs.

Forest Management Services

Arbor Day activities now include statewide coverage of schools at the 4th grade level.

A Design Specialist for Community Forestry services has been added to the Department staff.

A booklet *Urban Trees of Missouri* has been published and is available through the Department.

Law Enforcement Services

30 additional Conservation Agents were trained and assigned.

A law enforcement research specialist was added to the staff.

Information Services

The *Conservationist* has more pages and more color. Increased editorial services for K-8 & Natural History programs. Exhibit program for fairs & other community functions expanded. Book program expanded with new edition of *Wild Flowers*, *Wild Edibles* & *Wildlife Drawings*.

Conservation Education Services

An Outdoor Skills Unit to serve educational systems has been established.

The S.P.O.R.T. Program was developed to improve outdoor ethics.

22 firearms and 7 archery ranges have been developed.

Five educational modules in the Outdoor Skills series were published and 10 more are being developed.

K-8 (Phase I of Design for Conservation Education Program) is providing classroom materials to 10,312 teachers serving approximately 300,000 students during 1980-81 school year.

The Outdoor Classroom and Mobile Teacher Training Programs were expanded.

Natural History Activities

Interpretive services provided by naturalists at the Department's Jefferson City Headquarters, Shepherd of the Hills Hatchery, Busch Wildlife Area, Reed Wildlife Area, and Rockwoods Reservation.

Special Projects include:

Heron rookery survey; tree frog study; bluebird study; barn owl study; cave crayfish study; Illinois mud turtle study; raptor rehabilitation program; herbarium study of rare plants; cave inventory with U.S.F.S.; breeding bird survey; establishment of a Native Plant Society and Herpetological Society; rare plant survey; natural areas survey; urban habitats of Kansas City; sink hole pond survey; ginseng management; massasauga rattlesnake; Franklin's ground squirrel; jack rabbits; Blanding's turtle; barn owls; bantam sunfish; spring cave fish, and North Fork turtles.

Special Programs include:

Eagle Days, Prairie Days and programs on herptiles, birds, natural areas, endangered species, botany, nature interpretation and urban biology.

Publications now available include:

Bird Study, Venomous Snakes, Backyard Birds, Birds at the Feeder, Winter Twig Key, Herptile Management, Frogs & Toads of St. Louis, Kansas City and Springfield areas; Selected Endangered Species; Rare & Endangered Species booklet, Natural Areas Directory, Snakes of Missouri, Ginseng, Vertebrate Wildlife Species of Missouri, Eagles, Snakes & Man.

MANAGEMENT AND RESEARCH

Wildlife Research and Management

The wildlife research and management programs have been expanded to include:

An improved annual furbearer population survey. Upland sandpiper and loggerhead shrike research. Studies of shorebird populations and migration patterns. Development of an annual state breeding bird survey. Studies of plant and animal response to wetland management. Research on the ecology of bobcats and gray foxes. Raccoon reproduction studies. Bat habitat and population dynamics research. Expanded ruffed grouse and giant Canada goose restoration programs.

Aquatic Wildlife Research and Management

Three water quality biologists were employed to monitor pollution and speedup response to pollution incidents.

Aquatic wildlife programs were expanded to include:

Research on freshwater mussels as indicators of water quality was initiated.

An early life history study of the bluestripe darter, which is a rare species in Missouri.

A study of channel catfish in streams.

A study of mussels in the Osage River Basin.

During the past year, the Meramec Basin mussel study was completed and published as Aquatic Series No. 17.

Forest Research

A forest research coordinator was employed.

Forest Fire Control

A fire prevention training specialist has been added to the staff.

For fiscal 1980-81, the Department matched a federal grant of \$97,600 for rural fire protection. The \$195,200 will be distributed among rural fire departments throughout the State.

Great Rivers Borders Enhancement

A program for claiming river islands was initiated. Several areas along the Missouri and Mississippi rivers were purchased to protect river habitat, and provide potential for restoration of riparian ecosystems.

Two fisheries management biologists were employed to work exclusively on the Missouri & Mississippi rivers to conduct research and develop management program.

MISCELLANEOUS ACTIVITIES

Hunting and fishing permit fees for residents over 65 years of age were waived.

Hunting permit requirements for youngsters were liberalized.

Area management includes special consideration for handicapped users.

More than 100 miles of hiking trails have been developed on Missouri Department of Conservation lands.

Archery deer and turkey hunting permits were combined without an increase in fees.

The Environmental Branch of the Planning Section was expanded to work more actively on State, Federal and private projects affecting wildlife, fish, and forestry resources.

The Planning Branch was further expanded for in-depth planning, surveys, and research on the human dimensions of wildlife and forestry management and for demonstrating resource assessment techniques.

A social research analyst was added to the staff to set-up studies like the three-city landowner survey, trout park usage, duck stamp study, hunter and angler studies.

Two shorebird marsh areas were constructed on the August A. Busch Memorial Wildlife Area.

Dixie Woods Interpretive Trail, designed to accomodate handicapped visitors, was completed at Little Dixie Wildlife Area.

